# TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104 Phone No. (512) 322-2212 Fax No. (512) 463-6693

#### PRODUCT EVALUATION

WIN-1536

Effective February 1, 2012

The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code** (IRC) and the **International Building Code** (IBC). This product shall be subject to reevaluation **April 2014**.

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Series 1650 Vinyl Fixed Windows, New and Replacement Construction, Impact Resistant, manufactured by

MI Windows and Doors, Inc. 650 West Market Street Gratz, PA 17030-0370 Telephone: (717) 365-3300

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

#### PRODUCT DESCRIPTION

The Series 1650 window is a vinyl fixed window. The vinyl fixed windows evaluated in this report are individual, impact resistant windows. This product evaluation report is for vinyl fixed windows based on the following tested constructions:

## **General Description:**

| System | Description             | Label Rating             |  |
|--------|-------------------------|--------------------------|--|
| 1      | Series 1650 Vinyl Fixed | FW-LC50 72 x 72; FIN     |  |
|        | Window; Fin; (O)        | AAMA 506                 |  |
| 2      | Series 1650 Vinyl Fixed | FW-LC50 72 x 72; FINLESS |  |
|        | Window; Finless; (O)    | AAMA 506                 |  |

## **Product Dimensions:**

| System | Overall Size | Fixed Daylight Opening Size |  |
|--------|--------------|-----------------------------|--|
| 1      | 72" x 72"    | 66" x 66"                   |  |
| 2      | 72" x 72"    | 66" x 66"                   |  |

## **Glazing Description:**

| System | Glass Construction 1 | Glazing Method <sup>2</sup> |  |
|--------|----------------------|-----------------------------|--|
| 1 IG-1 |                      | GM-1                        |  |
| 2      | IG-1                 | GM-1                        |  |

Note: <sup>1</sup> See the "Glass Construction Key" for the glazing construction.

<sup>&</sup>lt;sup>2</sup> See the "Glazing Method Key" for the glazing method description.

## **Glass Construction Key:**

IG-1: The window contains a sealed insulating glass unit. The sealed insulating glass unit is comprised of a double strength ( $\frac{1}{8}$ ") annealed glass lite and laminated glass unit separated by an aluminum reinforced butyl spacer system. The laminated glass unit is comprised of two  $\frac{5}{32}$ " annealed glass lites with a 0.090" PVB interlayer. The glass thickness used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

## Glazing Method Key:

GM-1: The insulating glass units are set from the interior against a bed of structural silicone sealant. A rigid vinyl snap-in glazing bead secures the insulating glass unit in place.

**Frame Construction:** The frame members are manufactured from extruded PVC (vinyl). The frame corners are mitered and welded construction.

Sash Construction: N/A.

Reinforcement: N/A.

Hardware: N/A.

#### **Product Identification:**

**System 1:** A certification program label (AAMA) will be affixed to the window. The certification program label includes the manufacturer's code name (**MTL-2**); product name: **1650 PW (FIN)**; performance characteristics; approved inspection agency (AAMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05 and AAMA 506-06.

**System 4:** A certification program label (AAMA) will be affixed to the window. The certification program label includes the manufacturer's code name (**MTL-2**); product name: **1650 PW (FINLESS)**; performance characteristics; approved inspection agency (AAMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05 and AAMA 506-06.

## **LIMITATIONS**

## **Design pressures:**

| System | Maximum Width (in.) | Maximum Height (in.) | Design Pressures (psf) |
|--------|---------------------|----------------------|------------------------|
| 1      | 72                  | 72                   | ± 50                   |
| 2      | 72                  | 72                   | ± 50                   |

**Impact Resistance:** These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. The assemblies passed Missile Level D specified in ASTM E 1996-02/05. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

**Acceptance of Smaller Assemblies:** Window assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

#### INSTALLATION INSTRUCTIONS

**General:** The window assembly shall be installed in accordance with the manufacturer's installation instructions and this evaluation report. Detailed drawings and installation instructions are available from the manufacturer.

#### Installation:

**Option 1 (Fin Installation to Wood):** The wood wall framing members shall be minimum Spruce-Pine-Fir dimension lumber. The window shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 6 screws. The frame head, sill, and side jambs are secured to the wall framing. The fasteners shall be spaced approximately 2 inches from each corner and approximately 8 inches on center. The fasteners shall be long enough to penetrate a minimum of  $1\frac{1}{2}$  inches into the wall framing members. The window shall be set in a bed of silicone.

**Option 2 (Frame Installation to Wood):** The wood wall framing members shall be minimum Spruce-Pine-Fir dimension lumber. The window shall be mounted to the wood wall framing members using the frame of the window with minimum No. 8 screws. The frame head, sill, and side jambs are secured to the wall framing. The fasteners shall be spaced located approximately 4 inches from each end and 16 inches on center. The fasteners shall be long enough to penetrate a minimum of  $1\frac{1}{2}$  inches into the wall framing members. The window shall be set in a bed of silicone.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.